

F. Mitigation Monitoring

Page F-1, under F.2 Enforcement Responsibility —

The CSLC is responsible for enforcing the procedures adopted for monitoring through the environmental monitor assigned to each construction spread. Any assigned environmental monitor shall note problems with monitoring, notify appropriate agencies or individuals about any problems, and report the problems to the CSLC or its designee. Enforcement authority for all issues is divided between the CSLC and responsible agencies.

Page F-2, under F.4 General Monitoring Procedures —

General Reporting Procedures. Site visits and specified monitoring procedures performed by other individuals will be reported to the environmental monitor assigned to the relevant construction spread. A monitoring record form will be submitted to the environmental monitor by the individual conducting the visit or procedure so that details of the visit can be recorded and progress tracked by the environmental monitor. A checklist will be developed and maintained by the environmental monitor to track all procedures required for each mitigation measure and to ensure that the timing specified for the procedures is adhered to. The environmental monitor will note any problems that may occur and take appropriate action to rectify the problems. Issues identified by environmental monitors would also need to be reported immediately to responsible agencies, including the California State Fire Marshal (CSFM).

Page F-3, Table F-1 —

Table F-1. Mitigation Monitoring Program – Pipeline Safety and Risk of Accidents

Impact	Mitigation Measure ¹	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
S-1: Construction activities present hazards to the public and construction workers	S-1a: Minimize effect on other underground utilities. <u>Protect City of Benicia water pipeline.</u>	Entire alignment	Compliance monitoring.	Reduces damage to existing facilities.	CSLC	Before and during construction
S-2: A pipeline accident could result in injury or fatalities to nearby public.	S-2a: Prepare a Supplemental Spill Response Plan with resource information specific to approved route.	Entire alignment	Review and approval of plan.	Minimize effects in the event of a spill.	CSLC, <u>CSFM</u>	Prior to approval of construction
	S-2b: Perform <u>regular</u> monthly leak detection tests.	Entire alignment	Review monthly <u>regular</u> test results.	Reduce the impacts associated with slow releases.	CSLC, <u>CSFM</u>	During and after construction
	S-2c: Perform valve location review along entire route.	Segment 3 <u>Entire alignment</u>	Review of Applicant's relocation analysis report <u>final pipeline design</u> .	Increase effectiveness of check valves at MP 20-1 .	CSLC, <u>CSFM</u>	Prior to approval of construction

¹ The tables in Section F include abridged versions of the text of the Mitigation Measures which are embodied in full within Section D of the Draft EIR, combined with the modifications contained within Section 4 of this document. The Mitigation Monitoring Program presented to the CSLC for adoption will contain a full compilation of the text from these two documents. ~~The full text of all mitigation measures is presented in Section D.~~

Table F-1. Mitigation Monitoring Program – Pipeline Safety and Risk of Accidents

Impact	Mitigation Measure ¹	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	S-2d: Prevent third party damage in most densely populated areas.	MP 24.5 to 28.3 (Fairfield/Suisun City) and MP 68.5 to 69.0	Approval of plans to minimize third-party damage and monitoring of implementation.	Minimize risk of pipeline rupture due to third-party damage.	CSLC, CSFM	Prior to start of construction
	S-2e: Conduct pipeline inspections.	Entire alignment	Review inspection reports.	Minimize the likelihood of external corrosion caused releases.	CSLC, CSFM	During and <u>after</u> construction <u>and before operation</u>
	S-2f: Ensure proper cathodic protection.	Entire alignment	Review inspection reports.	Ensure that adequate cathodic protection levels are maintained.	CSLC, CSFM	During and after construction
	S-2g: Install pipeline markers	Entire alignment	Observe <u>spacing and location of</u> markers to verify compliance.	Minimize third-party damage.	CSLC, CSFM	During and after construction
	<u>S-2h: Ensure proper design and design approval and provide completion report.</u>	<u>Entire alignment</u>	<u>Review design calculations and construction drawings and pipeline integrity test results.</u>	<u>Reduce likelihood of design flaw.</u>	<u>CSLC, CSFM</u>	<u>During and after construction</u>
S-3: Improper pipeline abandonment or removal from service could cause contamination, landslides, or erosion.	S-3a: Implement proper pipeline abandonment or removal from service procedures.	All pipeline abandonment areas	Review of abandonment <u>report, procedures,</u> and identification of any sensitive land uses. <u>Review Reclassification Plan.</u>	Minimize adverse effects on special land uses and potential soil contamination.	CSLC, CSFM	Prior to pipeline abandonment <u>or removal from service</u>

Page F-5, Table F-3 —

Table F-3. Mitigation Monitoring Program – Biological Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
BB-2: Construction could result in the loss of individuals or known habitats of sensitive plant species or associated habitats.	BB-2a: Avoid <u>and/or compensate for rare</u> plants during construction.	All segments, except the Wickland Connection (Segment 7)	Conduct protocol-level surveys for rare plants and implement avoidance measures, such as fencing and worker training.	Total avoidance of impacts to rare plants. Compliance supervised and verified by the Environmental Monitor. <u>Coordinate mitigation or compensation for lost plants with CSLC and CDFG and/or USFWS, as appropriate, prior to any ground disturbance</u>	The Environmental Monitor shall be a qualified biologist approved by USFWS and CDFG. <u>Consultation with CSLC, CDFG and USFWS regarding compensation</u>	Surveys and avoidance <u>and/or compensation</u> shall be completed prior to construction. Verification of measures implemented to occur during construction.

BB-5: Construction in wetlands would result in vegetation removal within the project ROW or disrupt the hydrology of the wetlands.	BB-5a: Avoid, minimize, and/or compensate for permanent or temporal damage and/or loss of wetland vegetation types.	All segments, except Segment 4 and Segment 6	Consultation and implementation of avoidance measures during construction as verified by the Environmental Monitor over a five-year period. <u>Review of permits from agencies with jurisdiction.</u>	To restore the function of the affected wetland to pre-construction conditions.	ACOE and RWOCB	Map wetlands, avoid impacts, <u>review permits</u> , and prepare plan for approval prior to construction. Implement plan during and following construction.
<u>BB-7: Construction in native grassland could cause vegetation removal (Existing Pipeline ROW Alternative only)</u>	<u>BB-7a: Avoid and restore native grassland</u>	<u>Existing Pipeline ROW Alternative (vicinity of Travis Air Force Base and Dixon)</u>	<u>Completion of surveys to identify and map native grasslands defined as sensitive by CDFG, annual reporting, monitoring of implementation</u>	<u>Avoid, minimize, and compensate for direct impacts to native grasslands, identified as sensitive communities by CDFG</u>	<u>CSLC, CDFG</u>	<u>Prior to, during, and after construction</u>
<u>B-5: Construction and Potential Accidents could affect areas in Suisun Marsh</u>	<u>B-5a: Mitigation Segment EP-1 would reduce potential impacts to special status plant species as compared to the original Existing Pipeline ROW Alternative.</u>	<u>Existing Pipeline ROW Alternative</u>	<u>Consider alternate pipeline alignment to avoid wetlands in and around the Suisun Marsh</u>	<u>Avoidance of areas of wetlands in and around the Suisun Marsh</u>	<u>CSLC</u>	<u>Prior to construction</u>

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Table F-5. Mitigation Monitoring Program – Environmental Contamination and Hazardous Materials

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
EC-1: Pipeline construction through contaminated sites could cause health hazards to construction workers and the public.	EC-1a: Review agency records for medium potential impact sites. <u>Complete visual inspection.</u>	All medium potential sites as identified in Tables <u>GD 6.1</u> through <u>GD 6-7</u> .	Review summary report.	Confirm absence or evidence of offsite contamination at the pipeline alignment.	CSLC, DTSC, County environmental health departments	Prior to construction
	EC-1b: Review agency records for high potential impact sites. <u>Collect samples; prepare health and safety plans. Coordinate with Rhodia Inc. and involved agencies.</u>	All high potential sites as identified in Tables <u>GD 6.1</u> through <u>GD 6-7</u> , and other high potential sites discussed in Segment 1 that are not included in the tables.	Review environmental contamination reports.	Compare contaminant levels to appropriate threshold concentration levels and review adequacy of health and safety plan for existing contaminants.	CSLC, DTSC, County environmental health departments	Prior to construction

Table F-5. Mitigation Monitoring Program – Environmental Contamination and Hazardous Materials

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	EC-1c: Review exposed soil or groundwater for to identify previously unknown contamination. Perform investigations and prepare health and safety plans if required.	Along all segments of the pipeline alignment.	Coordinate with monitoring personnel to confirm appropriate training and understanding of testing equipment, review weekly reports prepared by monitoring personnel.	Conduct periodic site visits during construction to confirm that proper procedures are being implemented.	CSLC, DTSC, County environmental health departments	During construction

Pages F-9 and F-10, Table F-6 —

Table F-6. Mitigation Monitoring Program – Geology, Soils, and Paleontology

Impact	Mitigation Measure	Location (Milepost)	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
G-2: Pipeline construction could expose and damage paleontological resources.	G-2a: Prepare Develop and implement paleontological resource procedures.	Segment 1: MP 0.0 – 0.35 , Segment 2: MP 11.0 – 15.5 7.8 – 10.9 , 11.2 – 12.85 , 13.5 – 14.2 , 15.6 – 17.1 , Segment 3: MP 17.76 – 18.3 , Segment 4: MP 26.15 – 30.87 (end), Segment 5: MP 30.7 – 32.25 , 33.25 – 33.8 , 35.25 35.3 – 36.0 , 37.55 – 40.15 .	Paleontological monitoring and education of construction workers by a qualified paleontologist. All specimens collected from public land shall be deposited at a curating institute.	The Paleontological monitoring and procedures should be consistent with the Society of Vertebrate Paleontology guidelines (1995).	CSLC	Prior to ground disturbance, and construction monitoring during construction
G-3: Slope failures or downslope creep of unstable natural or man-made slopes along the pipeline could lead to substantial pipeline damage or failure.	G-3a: Perform geotechnical investigations at landslide crossings.	Segment 2: MP 9.7 to 10.7 , and MP 14.6 to 14.9 , 15.1 – 15.3 15.0 Segment 3: MP 19.81 – 19.83 19.7 to 20.1	Prepare site-specific geotechnical study at all alignment crossings of known landslide deposits, incorporate site-specific design features to minimize potential for landslides to affect the pipeline.	The design recommendations of the report should be consistent with standard geotechnical engineering practice.	CSLC, CSFM	Prior to project construction
	G-3b: <u>Locate valves on either side of landslide zone. Relocate the valve at MP 15.17.</u>	Segment 2: MP 15.1 to 15.25 <u>Entire alignment</u>	<u>Consider alternate pipeline alignment outside of known landslide hazard zones east of I-680. Review final pipeline design.</u>	The design recommendations of the report should be consistent with standard geotechnical engineering practice.	CSLC, CSFM	Prior to project approval

Table F-6. Mitigation Monitoring Program – Geology, Soils, and Paleontology

Impact	Mitigation Measure	Location (Milepost)	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
G-4: There could be excavation failure where the proposed pipeline crosses beneath or adjacent to active <u>highway or railroad ROW</u> .	G-4a: <u>Adequately bury and protect the pipeline</u> and <u>perform geotechnical investigations for construction below active railroads.</u>	In areas where the pipeline excavation is within 10 feet of the centerline of an active railroad.	Submit excavation and shoring procedures for review and approval to impacted counties for county approval regarding compliance with local regulations and review by UPRR.	Shoring plans for excavations should be consistent with accepted geotechnical engineering standards.	UPRR, <u>CSLC, local jurisdictions, Caltrans, and county trenching codes</u>	Prior to construction and during construction
G-5: Active fault crossings could result in pipeline rupture.	G-5a: <u>Complete Assessment of fault crossings. Implement specific requirements for Concord, Green Valley, and Cordelia Faults. Conduct geotechnical studies for fault crossing design.</u>	Segment 1: Concord Fault; Segment 2: Green Valley Fault; Segment 3: Cordelia Fault; Segment 5: Vaca Fault	Consider alternative pipeline alignment perpendicular to fault orientation (and outside landslide area). Review design proposals. ReviewSubmit trench design for fault hazard crossing.	Fault crossing design recommendations should be consistent with standard engineering practice.	CSLC, CSFM and Contra Costa County Department of Public Works (USDOT)	Prior to project approval
G-5: Active fault crossings could result in pipeline rupture.	G-5b: Incorporate earthquake response practice into pipeline operations and maintenance procedures.	Entire alignment, especially Segments 1, 2, 3, and 5.	Incorporate into pipeline operations and maintenance procedures to inspect all parts of the pipeline alignment that fall within the specified distance of the earthquake epicenter after a seismic event.	Inspections should be consistent with standard engineering practice.	CSLC, <u>CSFM</u>	Following a seismic event
G-6: Strong earthquake-induced ground shaking could result in significant damage to above-ground structures and lead to failure of open trenches during construction.	G-6a: <u>Use appropriate trench shoring including potential enhancements at Concord Station. Perform geotechnical investigations for excavation safety and trench design.</u>	Entire alignment	The results and recommendations of the investigation shall be provided to the excavation design team and incorporated into the Review final trench design.	Trench design recommendations should be consistent with standard engineering practice and county trenching codes.	CSLC	Prior to construction and during construction

Table F-6. Mitigation Monitoring Program – Geology, Soils, and Paleontology

Impact	Mitigation Measure	Location (Milepost)	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
G-7: Liquefaction could result in loss of ground bearing capacity and/or lateral spreading, both of which could result in damage to pipeline.	G-7a: Reduce liquefaction hazard.	Segment 1: MP 0.30–0.9, 3.0–5.02, 6.1–6.33 Segment 2: MP 6.33–7.75, and WC 6–15, Segment 3: MP 18.9–19.7, 22.85–24.5, and WC 16A and 17, Segment 4: MP 24.5–24.85, Segment 5: MP 61.2–65.2 and all WC's, Segment 6: MP 65.2–66.6, 66.8–67.2, and 68.3–70, Segment 7: all	Review of documentation of geotechnical report investigation by impacted counties for county approval regarding compliance with local regulations.	Liquefaction evaluation and design recommendations should be consistent with standard geotechnical engineering practice.	Contra Costa, Solano and Yolo County Departments of Public Works, CSLC, CSFM	Prior to construction
G-8: A seiche could remove the cover and damage the pipeline.	G-8a: Map and identify areas for protection from seiche inundation.	Segment 1: MP 4.2 to 5.02, Segment 2: MP 6.13 to 7.36	Review of <u>analysis of wave run-up and erosion potential</u> geotechnical report by impacted counties for county approval regarding compliance with local regulations.	Unknown	CSLC	Prior to construction

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Table F-7. Mitigation Monitoring Program – Hydrology and Water Quality

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
HS-1: Construction activities including ROW clearing can disturb stream sediments and leave exposed soil that can be washed into nearby waterways.	HS-1a: Define <u>water crossing techniques on construction plans; limit Suisun Marsh construction to October - April water crossings.</u>	At all water crossings	Approval of construction plans and schedule for construction work in stream channels by appropriate agencies	Minimal impacts to waterways with approval by appropriate agencies.	CSLC, applicable RWQCB, and CDFG	Prior to construction
	HS-1b: Open cut construction in streams shall be done using "in the dry" construction techniques.	At all open-cut water crossings	Use "in-dry" techniques for open-cut crossings.	Confirmation by appropriate agency and Environmental Monitor.	CSLC, <u>RWQCB</u>	Before and during construction

Table F-7. Mitigation Monitoring Program – Hydrology and Water Quality

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	HS-1c: Implement erosion control procedures.	Entire alignment	Implementation of specific conditions for erosion control.	Specific procedures shall be developed by an engineer or other appropriate professional with expertise in the field of hydrology and sediment transport and will be confirmed by an environmental monitor.	CSLC, <u>RWQCB</u>	During and after construction
	HS-1d: If any <u>flowing</u> water is present or expected to be present during construction in Pacheco Slough, cross Pacheco Slough using directional drilling methods.	Segment 1	Use directional drilling methods if water is present or expected to be present during construction in Pacheco Slough.	Review of construction schedule and confirmation of presence/absence of water in Pacheco Slough prior to construction.	CSLC, <u>RWQCB</u>	Before and during construction
HS-2: Contaminants leaking from construction equipment or discharge of hydrostatic test or dust control water could degrade surface or groundwater quality.	HS-2a: Discharge hydrostatic test waters at appropriate waste facilities.	Entire alignment	Monitoring of compliance.	All hydrostatic test waters are discharged at appropriate waste facilities.	CSLC, <u>RWQCB</u>	During construction
HS-3: Surface water can be contaminated during directional drilling if drilling fluid is released.	HS-3a: Create contingency plan for unanticipated release of drilling fluids.	Entire alignment	Prepare prevention and response procedures.	Review and approval of procedures by appropriate agency.	CSLC, <u>RWQCB</u>	Prior to construction
HS-4: Streambed scour could potentially rupture the pipeline causing a release of petroleum products.	HS-4a: Adequately bury and protect the pipeline	In streambeds along the entire alignment	Establish minimum burial depth of the pipeline at stream crossings and monitor pipeline integrity and cover depth routinely and after floods or other high flow events.	Review and approval of <u>geotechnical analysis and plans</u> for pipeline burial, setbacks, and/or bank protection and monitor integrity.	CSLC, <u>RWQCB</u> , <u>CSFM</u> , and <u>local flood control districts</u>	Before and during construction and operation
HS-5: Contamination of surface water could result from accidental rupture of the pipeline during operation or maintenance.	HS-5a: Create spill response procedures to protect waterways.	Entire alignment	Include in Supplemental Spill Response Plan specific measures for containment and clean-up of product spills that could possibly reach surface water.	Review and approval by appropriate agency.	CSLC, <u>CSFM</u>	Prior to construction

Table F-7. Mitigation Monitoring Program – Hydrology and Water Quality

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
GW-4: Drinking water could be contaminated if product from a pipeline accident migrated to a well used for municipal or private drinking water purposes.	GW-4a: Install thicker-wall pipeline or weight coating in strategic areas.	Entire alignment in areas within a shallow aquifer, or in an area likely to be disturbed by future construction activity near municipal wells	Identification of problematic areas by SFPP in a report.	Review and approval of report by appropriate agency	CSLC, <u>RWQCB</u> , <u>CSFM</u>	Before and during construction
	GW-4b: Locate the pipeline and all construction activity at least 200 feet from any existing water well. <u>Prepare Pipeline Wellhead Protection Plan where required.</u>	Entire alignment	Locate the pipeline and all construction activity at least 200 feet from any existing water well.	Submit plans for review and approval to CSLC and State Fire Marshal.	CSLC, State Fire Marshal , <u>CSFM</u>	During construction and operation
	GW-4c: Develop emergency response procedures for groundwater remediation.	Entire alignment	Develop emergency response procedures that specifically address measures for groundwater remediation.	Confirmation by appropriate agency.	CSLC, <u>RWQCB</u>	During operation

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Table F-8. Mitigation Monitoring Program – Land Use, Public Recreation, and Special Interest Areas						
Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
LU-2: Construction impacts to agricultural land could result in loss of topsoil and/or farming income.	LU-2a: Preserve topsoil for replacement and restoration.	Along agricultural segments of the pipeline route	Inspect pipeline construction activities on agricultural lands to ensure that topsoil is set aside and replaced as required.	Topsoils are replaced over the installed pipeline as prescribed.	CSLC	During construction
	LU-2b: Compensate landowners for the loss of income from cultivation of land taken out of production due to pipeline construction.	Along agricultural segments of the pipeline route	Obtain copies of <u>negotiated easements and offer letters</u> agreements signed between the farmers landowners and the Applicant.	Agreements Easements have been signed and are available.	CSLC	Before construction
<u>LU-1: construction and operational impacts due to the narrow UPRR ROW and the immediately adjacent commercial, industrial, and residential land use issues in central Davis</u>	<u>LU-1d: Mitigation Segment EP-2 would include a reroute around the City of Davis</u>	<u>Existing Pipeline ROW Alternative in vicinity of Davis</u>	<u>Consider alternate pipeline alignment to avoid Davis</u>	<u>Avoidance of areas of commercial, industrial, and residential land uses in central Davis</u>	<u>CSLC</u>	<u>Prior to construction</u>

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Table F-8. Mitigation Monitoring Program – Traffic and Transportation						
Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<u>T-9: Construction activities within the railroad ROW could disturb railroad operations. (Existing Pipeline ROW Alternative only)</u>	<u>T-9a: Coordinate with Rail Operators.</u>	<u>Existing Pipeline ROW Alternative in vicinity of active railroad lines</u>	<u>Railroad representatives shall be on site at all times during construction along active rail lines, if required and submission of documentation of coordination with rail operators</u>	<u>Plan and implement all activities within the railroad ROW with the appropriate railroad personnel</u>	<u>CSLC and railroad operators</u>	<u>Prior to and during construction</u>